

monink

The Newsletter of Monnett Experimental Aircraft, Inc.

JULY / AUGUST, 1984

Dear Friends,

Such a flurry of excitement comes over us now. We at MEA have much to do to prepare for your visit to Oshkosh. Or should I say for your "invasion" of our city as many local people call it! There certainly is a positive attitude all over town in anticipation of the EAA Oshkosh '84 Convention July 28 - August 4th. The first item this issue is to give you a rundown of our plans for the FLY-IN.

HOURS at the building will be 8am - 5pm daily with staff there to welcome you, fill your orders, answer any questions. Come and check out our "Warehouse Sale" for some extra goodies you or a friend may need.

A **SHUTTLE** will be running every hour from the North Forty Registration Area of the fly-in site to our building on 20th. This shuttle goes on the inside of the field and makes it easier for you as you don't have to fight any traffic. This is the same path the buses use to take you to and from Transient Aircraft Parking. You may also use these buses. Get off at the MEA sign on the T hangers and walk up to Monnett's.

The **FLIGHT LINE** will again have Sonerai, Monerai and Moni prototypes. Most of the time someone will be there to talk with you about the airplanes. Come see what's new! Park with us on the flight line if you bring your airplane in. John will again reserve several rows for our builders. They will be marked with Logo Flags so come join the rows...and rows...and....?

Our **BOOTH C-12**, in the South Exhibit Building, is the place to pick up current info packs, check on shuttle schedule, and find out what's going on for the week, and visit me!

Our **10TH Annual Builder's Hanger Party** will be Sunday night, July 29th, 8:00 pm in our hanger showroom. This is our chance to say thank you for your enthusiasm, support, and sometimes needed patience! If you are building or flying one of our designs, this is our party for you. We have also invited many special guests, Editors, Writers and Publishers so be sure to introduce yourselves. There never seems to be a problem with comradery at these parties!!

FORUMS will be held in the EAA Forum Tents this year -so that we may be listed in the forum schedule of the program book. They are Sunday and Wednesday morning at 10:15. Perhaps some informal ones will occur at the building throughout the week but the main ones will not be held in our facility this year.

AWARDS will be given to any builder who brings his Monerai, Sonerai, or Moni to the Fly-In! This is a tradition that John and I like to continue every year as it does give you recognition for all those precious hours spent on your

"Labor of Love". Sign In Please. To help us assure that you get your award, please sign in at the Booth or the building or the Party, if you fly in. Even if it's just for a day, we would like to know your name, address, Plans #, and N #.

Some **Special Notes:**

Pick up orders. Please order ahead if you know that you want to pick up a large order. That way we will have it packed and ready for you with no long delays. Mail and Phone Orders. There will be **no** shipping the week of the Fly-In so plan accordingly and order either before or after those dates if you really need something.

Construction Question Hour from 4-5. This will **not** be in effect for the week either. We need all of our staff to help us man the booth, flight line, and showroom.

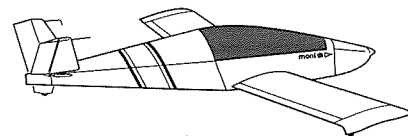
Notice to Moni and Monerai Builders.

Spar Fitting Deadline - We will no longer accept the return of spar fittings for testing after August 10th, 1984! If you have a Moni or Monerai and have not sent in your spar fittings to us for testing, do it now! Testing and possible heat treating will be the builders' responsibility after August 10th. This is in reference to our Monerai Service Bulletin #1 sent out February 17, 1983.

Vario Close Out

Moni and Monerai Builders should also check out our For Sale Column this issue as we are offering a close out on our line of Cambridge Electric Varios.

moni



Rivet Kit Delay

For those of you waiting for your Moni Rivet and Rib Retro Kits, we apologize for the delay. We are unfortunately at the mercy of our manufacturers, particularly in the case of the Cherry stainless rivets. This manufacturer's lead times are extremely long on our special rivets. We are doing everything we can to keep ahead of this and reduce the delay to you. If you could

place your order early this would assist us in anticipating the demand.

First Flights

Robert E. Blenden #165

6407 Lauren Ct.

Orlands, FL 32818

First flight was in May 1984. Now has about 3 to 4 hours.

Ron Fischer #173

1621 Norene

Anchorage, AK 99508

First flight was May 10th. Ron writes "Everything went real well and no adjustments were necessary. My boss at the Anchorage FSS had me write an article for one of the FAA Publications on the construction and first flight so when it's published I'll send you a copy."

Editor's Note: Please do send me a copy of articles you write or publicity you get. We have some very interesting people building our airplanes - as you'll see from reading this issue's News from Builders column. It's nice to get to know you!

News from Builders

R. A. Keating #130

23615 52nd Ave. E.

Graham, WA 98338

Mr. Keating has a series of 21 color prints on various stages of construction of his Moni. He'll send anyone interested a set for \$10.00 post paid.

The following are excerpts from a newspaper article which appeared in the *Seattle-Post Intelligencer*, May 21, 1984 about Robert Keating. He has even received a couple of letters in response to his article.

The Sky's the Limit for This Admiral

After a Navy career that included commanding three submarines in combat during World War II, Rear Adm. Robert Keating found retirement a little dull. So Keating, 72, built a motor glider.

Now he soars high in the sky, getting a bird's eye view of the world instead of a fish's eye view through a periscope.

The U.S. Naval Academy graduate, class of 1933, spent about 600 hours building his tiny Moni motor glider from plans and materials provided by the factory.

When the aluminum aircraft was finished, he trucked it to Pierce County Airport, better known as Thun Field, near Puyallup... As he demonstrated his home-built aircraft at Thun Field, Keating reminisced about his Navy career, especially during World War II. Early in the war he commanded the S-34, a submarine built in 1921, in which he made five patrols around the Aleutian Islands.

Then he was given command of a new submarine, the USS Barbel, and made three combat patrols off Okinawa. He was transferred off the Barbel in December, 1944. The next month, it was attacked by Japanese planes off Borneo, went down and all aboard died.

He will never forget one particular mission in his next submarine, the USS Rock. He took for Australian commandos into the South China Sea and put them ashore on Lombok Island in the Dutch East Indies. They were to locate Japanese guns shelling U.S. submarines passing by in Lombok Straits. The Australians found the guns and radioed their position

to Allied aircraft, which attacked the artillery emplacements and destroyed them.

But two of the four Australians were captured and beheaded by the Japanese. Keating will meet the two who survived, L. S. Black, who was then a first lieutenant, and Alex Hoffie, a former sergeant, in August when the Australians attend a reunion of men who served aboard the US Rock.

The reunion will be held in Manitowoc, Wisconsin. In June, Keating will visit Casper, Wyo. to dedicate a memorial to the men who perished on the Barbel, "one of 52 submarines we lost during the war," he said.

Keating vividly recalls being attacked by depth charges dropped by enemy ships. "You can hear the screws (propellers) of the ships above you," he said. "Then you hear a loud click--that's the detonator that fires the charge. Then there is a tremendous boom." "If you hear water swishing through your outside superstructure after the boom, that means the depth charge went off real near."

Keating, a native of Boston, retired from the Navy in late 1959. He and his wife, Minnie, have two married daughters. The couple lives in Graham, a few miles from Thun Field.

"You might say that after years spent under the sea in submarines, I now really enjoy being on top of things in a glider," said the admiral.

Norm Rambow #106

W 402 Main St.

Ritzville, WA 99169

Norm's Moni is still newsworthy in his home town. The following are excerpts from an article in the *Ritzville Adams County Journal*, May 24, 1984.

Norm Rambow has been doing his best to find spare time he can use to finish his hobby project - a model airplane - although his wife, Donnie would rather see him using that same time helping her with their new landscaping design outside their apartment building at 402 West Main in Ritzville...

But Donnie hasn't seen much of Norm's landscaping skills lately, and it can't be attributed to the bad weather or his duties at his muffler and auto repair shop. Norm has his eyes focused on a Fourth of July deadline for completion of his project - which means becoming airborne in the 14'7" long airplane he's been building from a kit for the last 18 months.

When a visitor first enters Norm's Airplane Factory, the sight of an airplane inside the apartment brings forth a reaction of surprise and laughter. It looks kind of silly to see an airplane with its tail in a bedroom, cockpit and wing area in a hall, and nose in a bathroom, with one wing taking up a hall and the other protruding into the living room.

Flying the plane is still a dream - which Rambow hopes will come true on July 4. As a pilot of gliders and motorized planes in the South Pacific during World War II, Norm had ample experience with aircraft and now, at age 60, he's gotten the urge to regain his wings.

Altho the landscaping work may be done by the time the plane is completed, Norm knows that Donnie will have at least one other new project on which he can spend his spare time. "I told her I wouldn't finish remodeling this apartment until I was through using it as an airplane factory, I guess that once I get this ready to fly, I'll have to go back to work around here."

For Sale

Dieter Kaltschmid

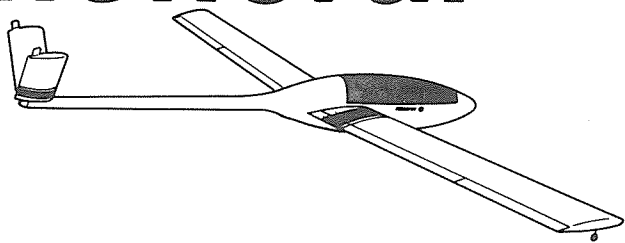
26521 Saddlehorn Lane

Laguna Hills, CA 92653

714/831-6103

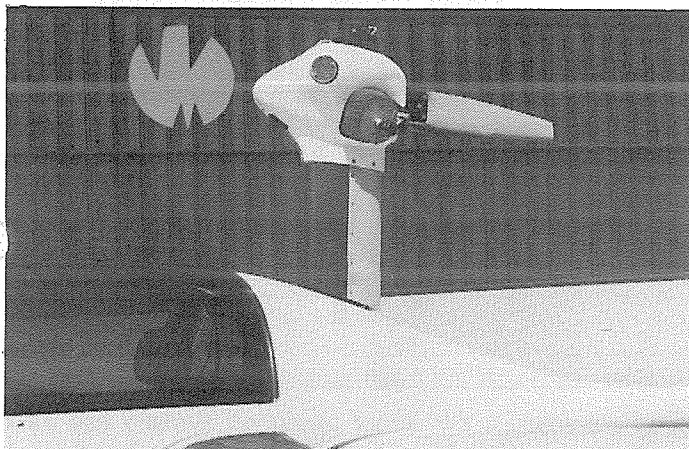
Moni Kit - Tail finished, fuselage finished, have material for wing mod, spars complete.

monerai



Konig Power Pod

The power pod is now flying with the new small cowl-ing. It is providing much better ground cooling for the long taxiing we have to do around this airport. This new cowl has a simple installation as does the rest of the power pod. The boost in Monerai's take off and climb performance is significant and impressive. Monerai will easily rival **any** self-launching sailplane or even Moni in that department! Once the cooling and prop are locked in we will be able to give you measurements on glide performance. We expect an outstanding gain over the Zenoah power pod.



By the Fly-In, Monerai "P" will also have a little larger fuel capacity via a custom tank. This will be finalized soon and will be a part of the Konig power pod kit. The pivot



stick with built-in trim system seems to work well. Once this testing is completed, sometime in the near future, we hope to have drawings for retrofitting this option to Monerais with the "slide" stick.

If our schedule stays on track, we will expect to offer the Konig Power Pod Kit for sale by the Fly-In with September as the approximate date for deliveries.

First Flights

Leland Trew #325

Rt. 1, Box 418

Greenville, KY 42345

Leland's first flight was June 2, 1984.

Tom Sleeper #162

1410 Bay Shore Drive

Garland, TX 75040



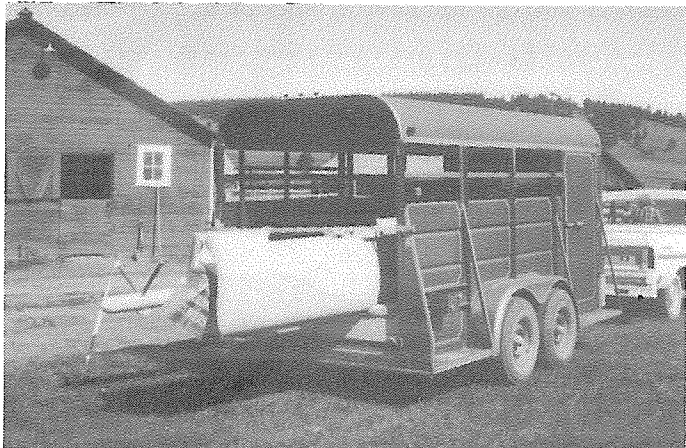
Tom writes: "Monerai #162 made her 1st flight August 27th. Restrictions are about flown off and now we can work toward Silver C."

News from Builders

Ed Musselman #106

Rt. 3 Box 28

Lewistown, MT 59457



Ed writes: "Monerai #106 is finished and painted yellow. (DuPont Centari Acrylic - "Lemon Twist"). Heat build up is low with this light color. It will fly after the FAA visit (difficult here) and I finish its trailer. We displayed it at a pilot's convention in Lewistown (on the lawn next to the pool). We hauled it in a stock trailer - carefully! I'm glad I built it tho it will be more fun to fly I'm sure. Thanks to you for doing it in the first place and thanks to your good group for all the help."

The following are quotes from a newspaper article Ed sent about the convention:

Pilots from all over Montana will gather in Lewistown for the Montana Pilots Association annual convention... Saturday events include education sessions and a keynote banquet speech by Captain Ed Musselman... Captain Ed Musselman, retired, flew for Western Airlines for 36 years. His total flight time passed the 30,000 hour mark in 1978... He recently finished building his all metal sailplane at his ranch in the Judith Mountains. He will have it on display at the Yogo Inn during the convention..."

For Sale

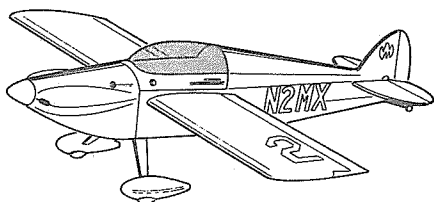
William L. Sullivan #164
517 N. Main St.
Henderson, KY 42420
502/826-3965 days
502/826-3050 nights

Monerai N 51-WS. Zenoah engine and pod. Spar reinforcement kit. Approximately 9 hours flight time. Slight aileron damage from tie rope. Too many hobbies.

Buddy Wehman #322
804 Academy Road
Walterboro, S. C. 29488
803/538-8241

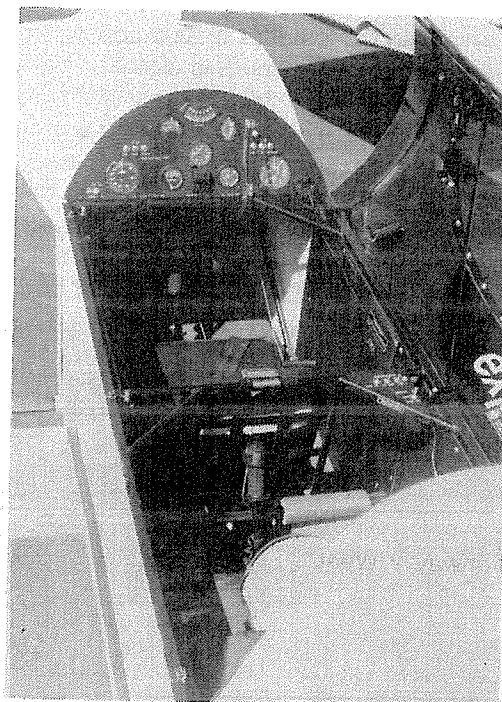
Financial priorities force sale. Monerai project. 1/3 complete. Welding has been completed, spar fittings, attached, modification ready to attach, boom mounted, tail feather spar/ribs glued, one tail surface covered, spar lightening holes cut out and radiused, spar caps smoothed down to 180 grit and several other parts completed.

sonerai



"S" Flies June 13th

John is really pleased with the way this newest Sonerai flies. He says it is a very solid airplane and flies much like the other Trigear with very good landing and take-off handling characteristics. This VW Engine is one which set the World's Records in the Monex two years ago. It runs very smoothly with the Distributor Ignition System. This small bump on the cowl, we call our beauty mark, houses the distributor and represents a huge savings over the cost of a magneto system. Incorporating this new idea John plans a future updated Engine Conversion that will help keep the cost of the VW Aero Conversions to a minimum.



Response to this larger stretched airplane has been very encouraging. Many feel that Sonerai is now grown up to a full fledged teenager! Plans for the II LS will be available at the Fly-In. The option available will be either Tri-Gear or Tail dragger. This will be a completely new set of drawings which will help eliminate confusion with all of the standard Sonerai options. (Now try to make a choice as to what best suits your needs!!) "S" Kits will also be available in August. Builders expecting to order the pre-welded fuselages should order them now!

Prewelded Fuselage Special

We have a few standard Sonerai prewelded fuselages in stock now (with the long front seat). They are being offered at a special discounted price. Call for details now. A one time offer only!!

Main Gear Axle Assembly

We have developed a new axle assembly which helps make a cleaner wheel pant installation and is improved over the standard bolt and plate we've used for years. This alternate assembly drawing is available if you send a SASE to Carol requesting it. It has been included on all recent plan sets and will be included in the Landing Gear Kits from now on.

"B" Wing Upgrade Kits

A set of 4 additional ribs to upgrade a standard built Sonerai II wing to the new "B" wing, as in the stretched Sonerai, is available now. The cost is \$52.00. It includes 4 ribs and drawings.

Fuselage Tank

The new 8 gallon auxiliary turtledeck tank can be fitted to existing Standard Sonerai's.

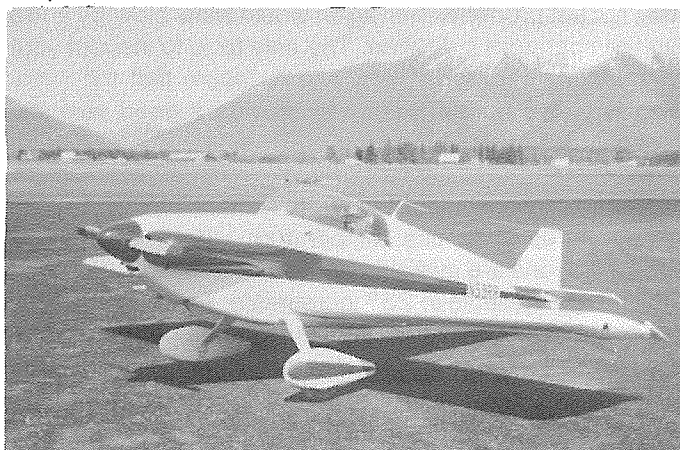


It is available now. Tank with cap costs \$100.00. Drawings for suggested installation are included but plumbing, valve, and mounting hardware are extra.

First Flights

Robert R. Reisinger #1075 IIL

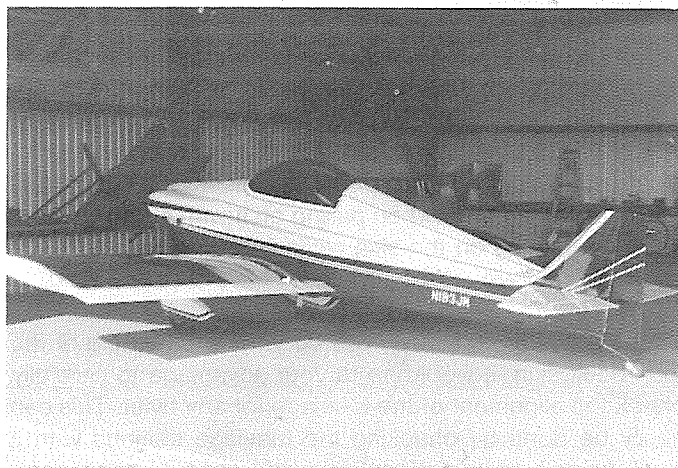
5885 Highway 2 West
Kila, MT 59920



Bob writes: "It flies great. It weighs 529 lbs. empty with radio, carb heat, and cabin heater. With one on board it gets off the ground in quite a rush with the Warnke 52/50 prop and indicates 120 mph at 2900. The upper left in the picture is Glacier Park and the picture was taken on the ramp at Kalispell International Airport. We really have nice scenery to look at when we fly but it does get a tad bumpy at times."

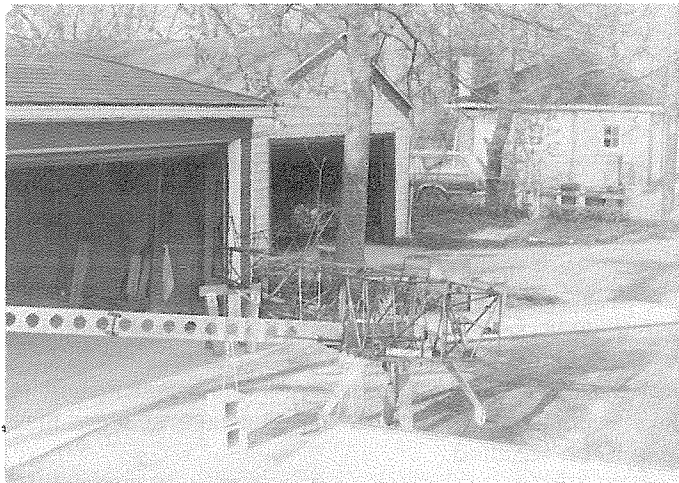
News from Builders

Jack Milchanowski #1183 IIL
2004 Dennis
Hammond, LA 70401



Jack's 1st flight was listed in March/April *Monink*. He now sends a new photo and writes: "After I got all the little bugs out of my Sonerai and flew my restriction time off, I repainted. I remain very pleased with the airplane and am quite proud of the new finish."

Terry Straker #1548 IIL
739 Main
Evanston, IL 60202



Terry says "P.S. I think I'll fly with the cement block balast. Will it affect my weight and balance?"

For Sale

Mike Kasuboski #1495 IIL
3305 Highway 116
Omro, WI 54963
414/833-7446

Sonerai IIL fuselage about 50% complete. \$2,000.

Professor Novak Writes

Moni Wing Skin: Just a reminder for any of you who are continuing to fly your aircraft with bonded wings. Frequently inspect the wing skin top and bottom for any indications of delamination. This will appear as a loose section of skin over a rib when pulling on it with a suction cup; or when tapping on the skin while following the rib line, a loose section will rattle rather than have a solid sound.

Moni, Turtledeck: Before you do your final riveting of the turtledeck skin, it would be to your advantage to carefully check the alignment of the fuselage for any twist. This can easily be done by checking the fuselage stations with a level, using bottom surface for a reference as necessary.

Do not trust the clecos to hold everything square just because it was straight the first time you had it together. When clecos are in short supply and only a few are used, it could allow the parts to shift around a little, possibly creating problems later on. This rule holds true not only for the turtledeck skin but any area of sheet metal construction.

Moni, KFM: Your KFM manual calls for a torque of 18-20 ft. lbs. (216-240 inch. lbs.) on the AN5 (5/16") motor mount bolts. You should note that FAA, AC43.13-1A calls for a torque of 100-140 inch lbs. to be used on an AN5 bolt with an AN365 lock nut. An AN365-524 nut has a friction drag torque of approximately 20 inch lbs. (new). This figure should be added to the specified limits.

Sonerai, Engine Mounting: Mount the engine to the airframe using the aluminum spacers as shown in the catalog. The rubber mounts are meant to be used with a 3/8 inch I.D. x 1/2 inch O.D. steel bushing 1-3/4 inches long inside of them. A piece of 1/2 inch x .058 wall 4130 tubing works well. 3/8 inch diameter bolts are used for mounting. An AN960-6 washer should be used on each side of the rubber mount. Torque the mounting bolts/nuts to 175 inch/pounds. Check prop flange for squareness with the fuselage center line and use washers as spacers to correct misalignment as necessary. If the misalignment is severe, then the lengths of the aluminum spacers may have to be adjusted.

The 3/8 inch bushing stock that is used for the fuselage motor mount fittings should be shortened to 1-1/8 inches instead of the 1-1/2 inch length as shown in the drawings. If built as shown, the AN6-60A bolt furnished in the hardware kit will not be long enough. If the bushings are already welded in place and cannot be shortened, then AN6-63A bolts will have to be used. It is really an easy job to shorten the two top bushings but the bottom ones may be difficult.

General, Engine Temperature: Maintaining acceptable engine temperatures are very important factors when it comes to the reliability and usable lifetime of your engine.

An aircraft builder usually keeps a close eye on his

engine temperatures, especially during the first few flights. Unfortunately, the opinion that you form of your engine's performance is only as good as the information you receive. It is important that you know the difference between what your instruments are indicating and what is actually happening.

To start with, check your instruments for accuracy. The oil temperature can be easily checked by placing the bulb in a pan of boiling water. The temperature indicated should stabilize at 212°F. The same check can be used to check the low end of your cylinder head temperature gauge.

To check the high end of your CHT, there are several common liquids which are known to boil at a specific temperature. A few of these are: ethylene glycol (386°F), glycerin (550°F), and linseed oil (600°F).

If the gauge does indicate off slightly, it does not mean that the instrument cannot still be used, but only that a correction card should be placed near the instrument.

Another problem with CHT indications is the spark plug gasket type of thermocouple. Some brands of thermocouples are made with a thin aluminum or steel washer which can be prone to fatigue or tearing during installation or poor sealing under the spark plug base. A failure of the washer can allow blow-by of combustion gases, and heat the thermocouple sufficiently to give a faulty indication. An aircraft grade of copper thermocouple may be less prone to this type of malfunction; however, because of their bulk they are difficult to fit under the plug on a VW head and may not set properly. This again would allow blow-by and a high temperature indication. The only fix is to inspect your thermocouple for wear, etc. and to insure that the spark plug is tightened sufficiently to provide a good seal and prevent loosening of the plug.

Another convenient way to check your engine temperatures is to use temperature indicating crayons. These crayons are available from most welding supply outfits and are available in 25° increments. Each one is made of a substance that is known to melt at a specific temperature. When applied, the crayon will leave a mark similar to a chalk mark, but when the indicated temperature is reached the mark will melt and usually turn black or disappear. They are not too expensive (about \$5.00 each) and are very accurate ($\pm 1\%$).

A series of marks placed at the base of the cylinder head fins near the spark plug will give a good indication of cylinder head temperatures. One nice thing about the crayons is that marks can be placed anywhere on the engine to give you indications on total engine or cylinder cooling, and whether some areas are running hotter than others.

As far as engine temperature limits are concerned, I have not found an official VW limit prescribed. We can, however, compare it to other aircraft engines. For a Lycoming IO-360, the maximum CHT is 498°F with a

Bayonet style thermocouple. According to a Lycoming service representative approximately 50° should be added to this figure if a gasket type of thermocouple is being used, as a gasket type will indicate a hotter temperature than a bayonet type. Lycoming normally wants to see a cruise temperature of 400-420°F (Bayonet) and a cruise oil temperature of 210°F.

For a Continental O-200 the maximum CHT is 525°F taken with a gasket type thermocouple on the bottom, rear spark plug. The bottom or downstream location will give an indication which better represents the actual CHT. Unfortunately, with a VW we have no choice.

For a Franklin 165, the Maximum CHT is 520°F taken with a gasket type thermocouple. Remember, the baffling must work well enough to provide adequate cooling to the entire cylinder and head assembly and not just blowing air at the front or top of your cylinders.

With this information, you can perhaps form a better or more secure opinion of your engines operating conditions.

Randy Novak

New Items for Sale

Cambridge Electric Varios - Close Out

	List	Sale Price
CYS 160 2-1/4"dia. F.P.M.	\$325.00	\$299.00
CVS 150 2-1/4"dia. KTS	325.00	299.00
CVS 60 3-1/8"dia. F.P.M.	315.00	299.00

Sonerai Prewelded Fuselages -
Limited Special Discount Price
Call for details Now!

Sonerai "B" Wing Upgrade Kits -
Includes 4 ribs and drawings \$52.00

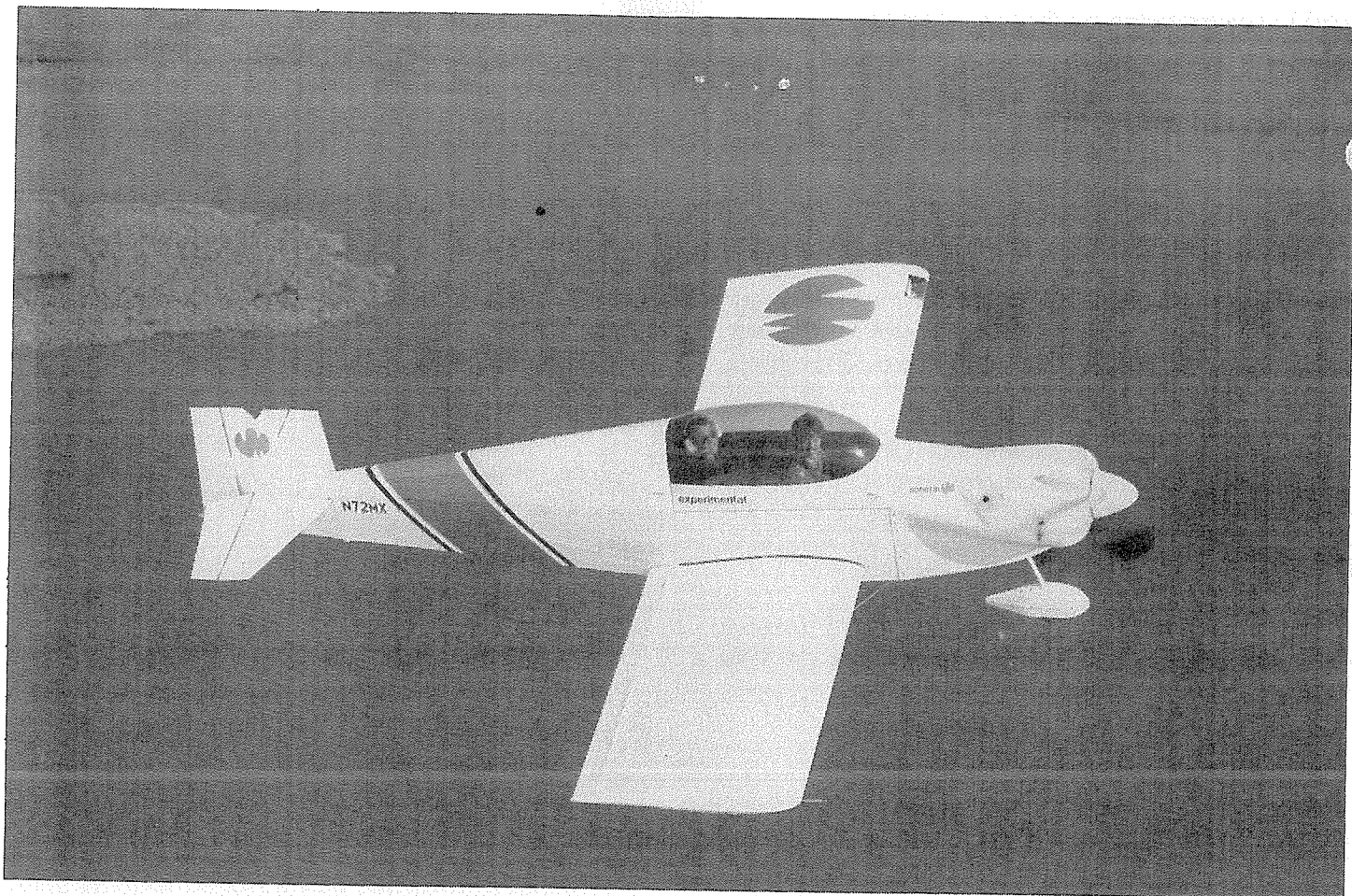
Sonerai Main Gear Axle Assembly Update -
send S.A.S.E.

The Ultralight Convention was a "bit of a bust" and may have seen its last day. The weather certainly did not cooperate. We however had many exciting visitors at our building over that weekend. Not the least of which was Ed Sterba who flew his Sonerai up Saturday. Ed has now been dubbed "Steady Eddie" cause he is to be relied on to be at all the fly-ins! One other trooper appeared - Linda Gillmore. She trailered her Moni in due to the ominous weather predictions which ended up to be a smart move. Thanks you two for coming! The other special guests I'm thinking of were international visitors. Mr. Walter J. Watkins who is a Technical Director for Sport Aircraft Association of Australia was in Oshkosh for the Ultralight Convention. It was wonderful to meet him as we have been corresponding for many years concerning approval of our aircraft kits in Australia. He has worked hard to get the Sonerai and all its variants approved. Now we hope to have him working on the Moni. Ann Walsh from Great Britain was also here for the Ultralight Convention as a guest speaker. She is a very famous Soaring and Ultralight pilot and is also the President of the World Ultralight Association. John first heard her speak at a Soaring Society Convention a few years ago and found her fascinating. She is quite a pilot! It was fairly busy at our building that Saturday which served to be a test bed for EAA Oshkosh '84 operations and also John's "Chicago Style" Hot Dog Stand!

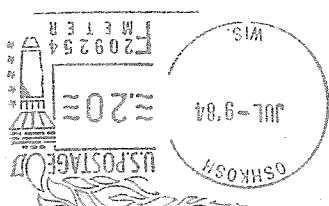
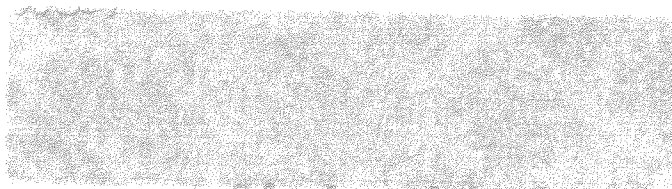
In closing, I find it interesting to note that the Sonerai I hanging in the museum entry is 13 years old this July. Now, I have an easy way of remembering this date, as son John was 13 in April and he was 4 months old when the Sonerai I first flew. Not only has the Sonerai progressed to Teen Years but so has our Son! Thirteen has been a lucky number for us as we were married on the 13th so for all you who are superstitious Never Fear, this is our LUCKY YEAR!! Be seeing you real soon -

Betty Monnett

**Oshkosh '84
Fly-In
SEE YOU THERE!
July 28 - August 4**



Monnett Experimental Aircraft has Completed Flight Tests on the New "Stretch" Sonerai II LTS Kit Aircraft.



monnett experimental aircraft, inc.
p. o. box 2984
oshkosh, wisconsin 54903

